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Amdt. dated August 23, 2006
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1.   (Currently Amended) An apparatus for processing a video an incoming bitstream coded from for a first hybrid video codec to a bitstream an outgoing bitstream coded for a second hybrid video codec, the apparatus comprising[[;]]:

a variable length decoder adapted to decode the incoming video bitstream from the first hybrid video codec, the variable length decoder being further adapted to output [[a]] decoded bitstream symbols;

a semantic conversion unit adapted to perform semantic conversion of the decoded symbols, the semantic conversion processing unit further adapted to process a portion of the decoded bitstream symbols to adapt the decoded bitstream symbols to be converted symbols compatible with the second hybrid video codec; and

a variable length encoder adapted to encode the outgoing bitstream converted symbols from the output of the unit to for the second hybrid video codec, thereby providing the outgoing bitstream.

2.   (Currently Amended) The apparatus of claim 1 wherein the first video codec is baseline H.263 and the second video codec is MPEG-4 and wherein the semantic conversion in the unit comprise is adapted to perform an inverse intra AC prediction of a plurality of intra macroblock coefficients based upon one or more predetermined parameters.

3.   (Currently Amended) The apparatus of claim 2 wherein the one or more predetermined parameters to perform the inverse intra AC prediction is provided on a macroblock by macroblock basis and a processing is provided on the macroblock by macroblock basis.

4.   (Currently Amended) An apparatus for processing a video bitstream coded from a first hybrid video codec to a bitstream coded to a second hybrid video codec The apparatus of claim 1 wherein comprising:

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decoding of the ~~input~~ incoming bitstream ~~comprising~~ comprises a plurality of macroblocks from the first hybrid video codec and decoding is performed on a macroblock by macroblock basis among the plurality of macroblocks[[,]];

the apparatus further comprising a processor comprising:

a framesize converter adapted to:

~~determining~~ determine if an input frame size of the plurality of macroblocks is supported by the second hybrid video codec; and

~~converting~~ convert the input frame size to ~~be~~ an output frame size supported by the second hybrid video codec if the input frame size is not supported by the second hybrid video codec; and

a motion vector converter adapted to:

~~determining~~ determine if one or more of a plurality of input motion vectors is supported by the second hybrid video codec; and

~~converting~~ convert the one or more input motion vectors to ~~be~~ one or more output motion vectors supported by the second hybrid video codec if the one or more input motion vectors is not supported by the second hybrid ~~codecs~~ video codec to form resulting transcoded data; and

~~encoding of~~ an encoder adapted to encode the transcoded data of the plurality of macroblocks on a macroblock by macroblock basis.

5.   (Currently Amended) The apparatus of claim 4 wherein the first hybrid video codec is Simple Profile MPEG 4 and the second hybrid video codec is Baseline H.263.

6.   (Currently Amended) The apparatus of claim 4 wherein the framesize converter is further adapted to convert the input frame size to an output frame size supported by the second hybrid video codec ~~input video frames that are not a valid output frame size are converted~~ by setting the output frame size to ~~the~~ a smallest valid output frame size that is larger than the input frame size and;

wherein the encoder is further adapted to:

for intra frames, ~~encoding the~~ encode additional macroblocks in ~~the~~ an output frame as ~~a fixed value~~ predetermined coded macroblocks, and

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for inter frames, ~~encoding the~~ encode additional macroblocks in ~~the~~ an output frame as "not coded" ~~macroblock.~~ macroblocks.

7.   (Currently Amended) The apparatus of claim 4 wherein the framesize converter is further adapted to convert the input frame size to an output frame size supported by the second hybrid video codec ~~input video frames that are not a valid output frame size are converted~~ by setting the output frame size to ~~the~~ a largest valid output frame size that is smaller than the input frame size and cropping macroblocks from ~~the~~ an input frame that do not fit in ~~the~~ an output frame.

8.   (Currently Amended) The apparatus of claim 4 wherein the motion vector converter is further adapted to convert input macroblocks with multiple input motion vectors ~~are converted~~ to a larger number of output motion vectors by replicating the input motion vectors.

9.   (Currently Amended) The apparatus of claim 4 wherein the motion vector converter is further adapted to convert input macroblocks with multiple input motion vectors ~~are converted~~ to a smaller number of output motion vectors by one or more processes including an arithmetic mean or a median process.

10.   (Currently Amended) The apparatus of claim 4 wherein the input motion vectors that reference a different reference frame than ~~the output codec~~ a reference frame associated with the second hybrid video codec are scaled to form the output motion vectors.

11.   (Currently Amended) The apparatus of claim 4 wherein the input motion vectors that use a higher resolution than that supported by the ~~output~~ second hybrid video codec are rounded to ~~the~~ a nearest valid output motion vector.

12.   (Currently Amended) The apparatus of claim 4 wherein the motion vector converter is further adapted to convert input motion vectors that are outside ~~the~~ a range of valid output motion vectors ~~are converted~~ by clipping ~~the~~ components to ~~the~~ largest allowed output values.

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13.   (Currently Amended) The apparatus of claim 4 wherein the <u>motion vector converter is further adapted to convert</u> input motion vectors that are outside ~~the~~ <u>a</u> range of valid output motion vectors ~~are converted~~ by choosing ~~the~~ <u>a</u> largest valid output vector with ~~the~~ <u>a</u> same direction as the input <u>motion</u> vector.

14.   (Currently Amended) The apparatus of claim 4 wherein the ~~determining, converting, determining, and converting~~ <u>the framesize converter and the motion vector converter</u> are provided <u>in part</u> by computer codes.

15.   (Currently Amended) The apparatus of claim 9 wherein ~~MPEG-4 macroblocks with 4~~ <u>multiple</u> motion vectors are ~~converted to a single motion vector by averaging the 4 vectors by one or more processes including an arithmetic mean or a median process~~ <u>4 motion vectors associated with an MPEG-4 input macroblock and a smaller number of output motion vectors is a single output motion vector.</u>

16.   (Currently Amended) The apparatus of claim 12 wherein the <u>input motion vectors are</u> MPEG-4 motion vectors ~~that are outside~~ <u>and</u> the range of valid <u>output motion vectors is an H.263 range of valid output</u> motion vectors ~~are converted by clipping the components to the~~ <u>and the largest allowed output values are</u> largest allowed H.263 values.

17.   (Currently Amended) The apparatus of claim 13 wherein the <u>input motion vectors are</u> MPEG-4 motion vectors ~~that are outside~~ <u>and</u> the range of valid <u>output motion vectors is an H.263 range of valid output</u> motion vectors ~~are converted by choosing~~ <u>and</u> the largest valid ~~H.263~~ <u>output</u> vector ~~with the same direction as the MPEG-4~~ <u>is a largest valid H.263</u> vector.

18.   (Currently Amended) The apparatus of claim 12 wherein the <u>input motion vectors are</u> MPEG-4 motion vectors that point outside ~~the~~ <u>a</u> video frame <u>and the largest allowed output values</u> are converted by clipping the components of the vectors to ~~the~~ <u>a</u> frame edge.

19. - 21. Canceled

22.   (Currently Amended) The apparatus of claim 4 wherein <u>at least one of</u> the ~~unit~~ processor, the decoder, the variable length decoder, the semantic conversion unit, the

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encoder, or the variable length encoder is further adapted to convert ~~the selected~~ an input P ~~frames~~ frame into an I ~~frames~~ frame.

23.   (Currently Amended) The apparatus of claim 4 ~~further comprising removing~~ wherein at least one of the processor, the decoder, the variable length decoder, the semantic conversion unit, the encoder, or the variable length encoder is further adapted to remove one or more MPEG-4 "Not Coded" frames from the decoded bitstream.

24.   (Currently Amended) The apparatus of claim 4 ~~further comprising converting~~ wherein at least one of the processor, the decoder, the variable length decoder, the semantic conversion unit, the encoder, or the variable length encoder is further adapted to convert one or more ~~of~~ MPEG-4 "Not Coded" frames into ~~an~~ one or more H.263 P ~~frame~~ frames each with ~~each macroblock~~ macroblocks coded as ~~a "not-coded" macroblock~~ "Not Coded" macroblocks.

25. - 27. Canceled

28.   (New) The apparatus of claim 2 wherein the first hybrid video codec is Baseline H.263 and the second hybrid video codec is MPEG-4.

29.   (New) The apparatus of claim 4 further comprising, skipping at a predetermined frequency, an optimized mode to prevent build up of a drift error in a transcoding process.